

Appln. No.: 10/697,387

Amendment Dated September 3, 2004 Reply to Office Action of June 3, 2004 MAT-8480US

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A rotation angle detector comprising:

a rotor;

first and second detecting elements which rotate according to a rotation of said rotor;

first and second detecting units for detecting rotations of said first and second detecting elements, respectively; and

a control unit for detecting a rotation angle of said rotor based on a first signal when a difference between [said] first and second signals output from said first and second detecting units ranges within a predetermined range, and for determining, based on said difference between said first and second signals, whether or not at least one of said first and second elements rotates within a predetermined tolerance.

2. (Currently Amended) The A rotation angle detector of claim 1, further comprising:

a rotor;

first and second detecting elements which rotate according to a rotation of said rotor;

first and second detecting units for detecting rotations of said first and second detecting elements, respectively;

a third detecting element which rotates according to the rotation of said rotor; [and]

a third detecting unit for detecting a rotation of said third detecting element,; and

wherein saida control unit operable to [detects] detect said rotation angle of said rotor based on a [said] first signal output from said first detecting unit and a third signal output from said third detecting unit when a difference between said first signal and a second signal output from said second detecting unit ranges within a predetermined range.

3. (Currently Amended) The A rotation angle detector of claim 1, further comprising:

a rotor;

first and second detecting elements which rotate according to a rotation of said rotor;

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first and second detecting units for detecting rotations of said first and second detecting elements, respectively; and

a third detecting element which moves according to the rotation of said rotor; and

a third detecting unit for detecting a movement of said third detecting element,; and

wherein said a control unit operable to detect [detects] said rotation angle of said rotor based on a [said] first signal output from said first detecting unit and a third signal output from said third detecting unit when a difference between said first signal and a second signal output from said second detecting unit ranges within a predetermined range.

- 4. (Original) The rotation angle detector of claim 1, wherein said first detecting unit includes a first magnet and a first magnetic sensor which detects a magnetic field from said first magnet.
- 5. (Original) The rotation angle detector of claim 4, wherein said second detecting unit includes a second magnet and a second magnetic sensor which detects a magnetic field from said second magnet.
- 6. (Original) The rotation angle detector of claim 4, wherein said second detecting unit includes a second magnet and a Hall element which detects a magnetic field of said second magnet.
- 7. (New) The rotation angle detector of claim 1, wherein said control unit determines that said at least one of said first and second detecting elements does not rotate properly if said difference between said first and second signals exceeds a predetermined value.
 - 8. (New) A rotation angle detector comprising:

a rotor;

first and second detecting elements which rotate according to a rotation of said rotor;

first and second detecting units for detecting rotations of said first and second detecting elements, respectively; and

a control unit for detecting a rotation angle of said rotor based on a first signal only when a difference between said first and second signals output from said first and second detecting units ranges within a predetermined range.

9. (New) A rotation angle detector comprising:

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a rotor;

first and second detecting elements which rotate according to a rotation of said rotor;

first and second detecting units for detecting rotations of said first and second detecting elements, respectively;

a third detecting element which rotates according to the rotation of said first detecting element;

a third detecting unit for detecting a rotation of said third detecting element; and

a control unit operable to detect said rotation angle of said rotor based on a first signal output from said first detecting unit and a third signal output from said third detecting unit when a difference between said first signal and a second signal output from said second detecting unit ranges within a predetermined range.